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### Nebraska Summary: S663 Case-IH Maxxum 100 Value

Nebraska Tractor Test Laboratory

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# SUMMARY OF OECD TEST 2445/1–NEBRASKA SUMMARY 663

## CASE IH MAXXUM 110 VALUE DIESEL

## 12 SPEED

### POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
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### MAXIMUM POWER AND FUEL CONSUMPTION

Rated Engine Speed—(PTO speed—1038 rpm)					
96.6 (72.0)	2200	5.97 (22.61)	0.434 (0.264)	16.16 (3.18)	
Standard Power Take-off Speed (1000 rpm)					
96.4 (71.9)	2119	5.84 (22.12)	0.424 (0.258)	16.50 (3.25)	
Maximum Power - (1 hour)					
97.0 (72.3)	1998	5.83 (22.06)	0.421 (0.256)	16.65 (3.28)	

### VARYING POWER AND FUEL CONSUMPTION

96.6 (72.0)	2200	5.97 (22.61)	0.434 (0.264)	16.16 (3.18)	Air temperature
85.0 (63.4)	2282	5.44 (20.60)	0.448 (0.273)	15.63 (3.08)	68°F (20°C)
64.2 (47.9)	2310	4.57 (17.30)	0.499 (0.303)	14.06 (2.77)	Relative humidity
44.4 (33.1)	2358	3.43 (12.99)	0.542 (0.330)	12.94 (2.55)	47%
22.3 (16.6)	2401	2.34 (8.85)	0.735 (0.447)	9.54 (1.88)	Barometer
--	2430	1.58 (5.98)	--	--	29.5" Hg (99.9 kPa)

Maximum Torque - 372.8 lb.-ft. (505.4 Nm) at 903 rpm

Maximum Torque Rise - 61.8%

Torque rise at 1800 engine rpm - 21%

### DRAWBAR PERFORMANCE

#### (Unballasted - Front Drive Engaged)

#### FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—6th (II-2) Gear									
82.3 (61.4)	6875 (30.58)	4.49 (7.23)	2194	5.2	0.508 (0.309)	13.81 (2.72)	187 (86)	72 (22)	28.7 (97.3)
75% of Pull at Maximum Power—6th (II-2) Gear									
64.9 (48.4)	5130 (22.82)	4.74 (7.63)	2290	4.1	0.568 (0.346)	12.33 (2.43)	189 (87)	79 (26)	28.7 (97.2)
50% of Pull at Maximum Power—6th (II-2) Gear									
43.9 (32.7)	3365 (14.96)	4.88 (7.86)	2335	3.2	0.639 (0.389)	10.96 (2.16)	187 (86)	73 (23)	28.7 (97.2)
75% of Pull at Reduced Engine Speed—7th (II-3) Gear									
65.3 (48.7)	5120 (22.78)	4.78 (7.70)	1619	4.2	0.484 (0.295)	14.46 (2.85)	187 (86)	77 (25)	28.7 (97.2)
50% of Pull at Reduced Engine Speed—7th (II-3) Gear									
43.9 (32.7)	3365 (14.96)	4.89 (7.86)	1637	3.2	0.535 (0.325)	13.10 (2.58)	187 (86)	81 (27)	28.7 (97.1)

**Location of tests:** Istituto per le Macchine Agricole e Movimento Terra 73, Strada delle Cacce 10135 Torino Italy

**Dates of tests:** October 2007 to January 2008.

**Manufacturer:** CNH Europe Holding S.A. 13, Rue Aldringen L-1118 Luxembourg

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.842 **Fuel weight** 7.01 lbs/gal (0.840 kg/l) **Oil SAE** 15W40 **API service classification** CH-4 **Transmission and hydraulic lubricant** Akcela Nexplore fluid **Front axle lubricant** Akcela Nexplore fluid

**ENGINE:** Make CNH Diesel **Type** four cylinder vertical with turbocharger and air to air intercooler **Serial No.** 433000 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.094" x 5.197" (104.0 mm x 132.0 mm) **Compression ratio** 17.5 to 1 **Displacement** 274 cu in (4485 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS:** **Type** front wheel assist **Serial No.** Z7BD02912 **Tread width** rear 56.3" (1430 mm) to 83.9" (2130 mm) front 52.2" (1325 mm) to 90.0" (2285 mm) **Wheelbase** 95.0" (2412 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.25 (2.01) second 1.83 (2.94) third 2.61 (4.20) fourth 3.13 (5.04) fifth 3.80 (6.11) sixth 4.59 (7.39) seventh 6.56 (10.55) eighth 7.59 (12.21) ninth 9.54 (15.35) tenth 11.11 (17.88) eleventh 15.87 (25.54) twelfth 23.09 (37.16) reverse 1.28 (2.06), 1.88 (3.02), 2.68 (4.31), 3.21 (5.17), 3.90 (6.27), 4.71 (7.58), 6.72 (10.82), 7.78 (12.52), 9.78 (15.74), 11.40 (18.34), 16.27 (26.19), 23.68 (38.11) **Clutch** dry disc hydraulically actuated by foot pedal **Brakes** wet disc hydraulically actuated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1970 engine rpm or 1000 rpm at 2120 engine rpm **Unladen tractor mass** 10240 lb (4655 kg)

**NOTE:** The data on this summary was obtained from OECD report 2445 conducted on the New Holland T6020 Delta Diesel.

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's three point lift capacity claims of 7509 lbs (3406 kg) (with 1 lift assist cylinder) nor 8813 lbs(3997 kg) (with 2 lift assist cylinders). The performance figures on this summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2445/1**, Nebraska Summary 663, December 10, 2009.

Roger M. Hoy  
Director

M.F. Kocher  
V.I. Adamchuk  
J.A. Smith  
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE									
(Unballasted - Front Drive Engaged)									
MAXIMUM POWER IN SELECTED GEARS									
Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
29.1 (21.7)	9195 (40.90)	1.19 (1.91)	2389	15.2	1st(I-1) Gear 0.635 (0.386)	11.03 (2.17)	189 (87)	73 (23)	28.7 (97.1)
42.0 (31.3)	9100 (40.47)	1.73 (2.78)	2350	14.4	2nd(I-2) Gear 0.606 (0.368)	11.57 (2.28)	189 (87)	86 (30)	28.7 (97.1)
58.7 (43.8)	8935 (39.75)	2.46 (3.96)	2312	13.2	3rd(I-3) Gear 0.540 (0.329)	12.97 (2.56)	189 (87)	75 (24)	28.7 (97.1)
68.1 (50.8)	8835 (39.31)	2.89 (4.65)	2285	14.2	4th(II-1) Gear 0.550 (0.335)	12.74 (2.51)	189 (87)	75 (24)	28.7 (97.1)
77.8 (58.0)	8765 (39.00)	3.33 (5.36)	2021	7.8	5th(I-4) Gear 0.527 (0.320)	13.31 (2.62)	187 (86)	64 (18)	29.1 (98.6)
85.3 (63.6)	7795 (34.67)	4.10 (6.60)	2001	5.3	6th(II-2) Gear 0.479 (0.291)	14.63 (2.88)	187 (86)	64 (18)	29.1 (98.6)
84.5 (63.0)	5300 (23.57)	5.98 (9.63)	1998	2.9	7th(II-3) Gear 0.483 (0.294)	14.52 (2.86)	187 (86)	64 (18)	29.1 (98.5)
84.5 (63.0)	4540 (20.19)	6.98 (11.23)	2003	2.4	8th(III-1) Gear 0.485 (0.295)	14.47 (2.85)	189 (87)	64 (18)	29.1 (98.5)
81.4 (60.7)	3460 (15.39)	8.82 (14.20)	2003	1.8	9th(II-4) Gear 0.503 (0.306)	13.95 (2.75)	189 (87)	63 (17)	29.1 (98.5)
79.5 (59.3)	2885 (12.83)	10.33 (16.63)	2005	1.4	10th(III-2) Gear 0.515 (0.313)	13.60 (2.68)	187 (86)	61 (16)	29.1 (98.5)

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 6th (II-2) gear	85.6	85.8
Bystander	--	--

**TIRES AND WEIGHT**

**Rear tires** - No.,size, ply & psi(kPa)  
**Front tires** - No.,size, ply & psi(kPa)  
**Height of Drawbar**  
**Static Weight with operator**- Rear  
- Front  
- Total

**Tested Without Ballast**

Two 600/65R38; \*\*,12 (80)  
Two 480/65R28; \*\*,12 (80)  
22.0 in (560 mm)  
6305 lb (2860 kg)  
4100 lb (1860 kg)  
10405 lb (4720 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

lift assist cylinders

Maximum force exerted through whole range: 5305 lbs (23.6 kN) (1 x 50 mm)  
6610 lbs (29.4 kN) (2 x 50 mm)

i) Sustained pressure of the open relief valve: 2610 psi (180 bar)

ii) Pump delivery rate at minimum pressure: 17.1 GPM (64.9 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 15.1 GPM (57.0 l/min)

Delivery pressure: 2320 psi (160 bar)

Power: 20.4 HP (15.2 kW)

## THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar) 2610 (180)

Location: lift cylinder

Hydraulic oil temperature: °F (°C) 150 (66)

Location: hydraulic sump

Category: II

Quick attach: None

**SAE Static Test**—System pressure 2350 psi (162 Bar)  
lift assist cylinder - 1x 50 mm

Hitch point distance to ground level in. (mm)	8.3 (210)	16.1 (410)	23.0 (585)	27.4 (695)	35.2 (895)
Lift force on frame lb	8430	7800	8160	7800	6700
" " " " " (kN)	(37.5)	(34.7)	(36.3)	(34.7)	(29.8)

**SAE Static Test**—System pressure 2350 psi (162 Bar)  
lift assist cylinders - 2 x 50 mm

Hitch point distance to ground level in. (mm)	8.3 (210)	14.2 (360)	23.0 (585)	27.4 (695)	35.2 (895)
Lift force on frame lb	10950	9960	10275	9645	8070
" " " " " (kN)	(48.7)	(44.3)	(45.7)	(42.9)	(35.9)

OECD test

inch mm

SAE test

inch mm

A	27.6	702	28.1	715
B	10.0	255	10.0	255
C	15.9	403	15.9	403
D	14.1	357	14.1	357
E	7.9	200	9.8	250
F	9.3	235	9.3	235
G	32.3	820	32.3	820
H	1.0	25	1.0	25
I	16.9	430	15.6	395
J	23.0	585	23.0	585
K	19.9	505	23.0	585
L	44.0	1118	44.0	1118
M	22.2	563	22.2	563
N	37.4	950	37.4	950
O	7.9	200	7.9	200
P	47.0	1195	42.0	1068
Q	33.5	850	31.3	795
R	30.2	768	32.3	820

